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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Shingo Tanaka et al. )  
Application No. 10/671,804 ) Group Art Unit: 2446  
Filed: September 29, 2003 ) Examiner: Farhad Ali  
For: MASTER COMMUNICATION DEVICE, ) Confirmation No. 9918  
SLAVE COMMUNICATION DEVICE, )  
COMMUNICATION CONTROL )  
APPARATUS, COMMUNICATION )  
SYSTEM, AND COMMUNICATION )  
CONTROL PROGRAM )

Attention: Mail Stop Appeal Brief - Patents  
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Sir:

**APPEAL BRIEF UNDER BOARD RULE § 41.37**

In support of the Notice of Appeal filed July 22, 2010, and further to Board Rule 41.37, Appellants present this brief and enclose herewith the fee of \$540.00 required under 37 C.F.R. 41.20(b)(2). This Appeal Brief is being filed subsequent to the August 13, 2010, mailing of a Notice of Panel Decision from Pre-Appeal Brief Review. Pursuant to the Notice of Panel Decision, the time period for filing the Appeal Brief is reset to one month from the mailing date of the decision, or the balance of the two-month time period running from receipt of the Notice of Appeal, whichever is greater. Thus, this Appeal Brief is being timely filed on or before September 22, 2010.

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If any additional fees are required or if the enclosed payment is insufficient,  
Appellants request that the required fees be charged to Deposit Account No. 06-0916.

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**I. Real Party in Interest**

The real party in interest is Kabushiki Kaisha Toshiba, the assignee of record.

## **II. Related Appeals and Interferences**

There are currently no other appeals or interferences, of which Appellants, Appellants' legal representative, or the assignee are aware, that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **III. Status of Claims**

Claims 1-8 and 11-20 remain pending in this application.

Claims 9 and 10 have been cancelled.

In the Final Office Action mailed April 23, 2010, the Examiner rejected claims 1-8 and 11-20 under 35 U.S.C. § 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 6,366,622) ("Brown") in view of Fujioka (U.S. Patent No. 6,907,227) ("Fujioka"), and further in view of Lee et al. (U.S. Patent Publication No. 2002/0090968) ("Lee").

Appellants filed a Pre-Appeal Brief Request for Review and a Notice of Appeal on July 22, 2010. A Notice of Panel Decision from Pre-Appeal Brief review mailed August 13, 2010, maintained the rejection. Accordingly, the final rejection of claims 1-8 and 11-20 is being appealed and a list of the claims on appeal is found in the attached Claims Appendix.

Furthermore, each claim of this patent application is separately patentable, and upon issuance of a patent will be entitled to a separate presumption of validity under 35 U.S.C. § 282.

#### **IV. Status of Amendments**

All claim amendments have been entered.

## **V. Summary of Claimed Subject Matter**

The subject matter set forth in independent claim 1 relates to a master communication device capable of simultaneously communicating with slave communication devices within a first limited number determined in advance (*see, e.g.*, Fig. 1; p. 4, l. 12-14; p. 8, l. 12-14). The master communication device comprises a communication judgment unit configured to judge whether or not one of the slave communication devices which has issued a communication request is currently connected (*see, e.g.*, Fig. 2; Fig. 4; p. 4, l. 16-19; p. 8, l. 29-31; p. 9, l. 22-29); a communication connection unit configured to connect the slave communication device judged not to be connected by the communication judgment unit (*see, e.g.*, Fig. 2; Fig. 4; p. 4, l. 20-22; p. 8, l. 32-33; p. 9, l. 30-36); a connected number judgment unit configured to judge whether or not the number of the slave communication devices connected currently reaches a second limited number less than the first limited number (*see, e.g.*, Fig. 2; Fig. 4; p. 4, l. 23-26; p. 8, l. 35 - p. 9, l. 1; p. 10, l. 10-15); a release selection unit configured to select at least one of the slave communication devices to be released, when determined to have reached the second limited number (*see, e.g.*, Fig. 2; Fig. 4; p. 4, l. 27-30; p. 9, l. 1-2; p. 10, l. 30-36); and a communication release unit configured to release the selected slave communication device (*see, e.g.*, Fig. 2; Fig. 4; p. 4, l. 31-32; p. 9, l. 2-3; p. 11, l. 32 - p. 12, l. 2).

The subject matter set forth in independent claim 11 relates to a communication control apparatus which controls a slave communication device connected to a master communication device capable of simultaneously communicating with the slave communication device within a first limited number determined in advance (*see, e.g.*,



Fig. 9; p. 5, l. 19-23; p. 14, l. 21-32; p. 17, l. 23-27). The communication control apparatus comprises a connection report receiving unit configured to receive a connection report from the slave communication device newly connected to the master communication device (see, e.g., Fig. 11; Fig. 13; p. 5, l. 25-28; p. 15, l. 14-16; p. 16, l. 29-32); a connection information registration unit configured to register information relating to the slave communication device currently connected to the master communication device (see, e.g., Fig. 11; Fig. 13; p. 5, l. 29-32; p. 15, l. 17-20; p. 16, l. 32-35); a connected number judgment unit configured to judge that the number of the slave communication devices connected to the master communication device reaches a second limited number less than the first limited number, based on information registered in the connection information registration unit (see, e.g., Fig. 11; Fig. 13; p. 5, l. 33 - p. 6, l. 2; p. 15, l. 20-22; p. 16, l. 36 - p. 17, l. 3); a communication device selection unit configured to select at least one of the slave communication devices that connection for the master communication device is to be released, when determined to have reached the second limited number (see, e.g., Fig. 11; Fig. 13; p. 6, l. 3-7; p. 15, l. 22-24; p. 17, l. 3-11); and a release instruction unit configured to transmit a release instruction to the slave communication device selected by the communication device selection unit (see, e.g., Fig. 11; Fig. 13; p. 6, l. 8-10; p. 15, l. 24-26; p. 17, l. 12-14).

The subject matter set forth in independent claim 13 relates to a communication system (see, e.g., Fig. 1; Fig. 9; p. 6, l. 11). The communication system comprises at least one of slave communication devices (see, e.g., Fig. 1; Fig. 9; p. 6, l. 12); and a master communication device configured to be able to communicate simultaneously

with the slave communication device within a first limited number determined in advance (see, e.g., Fig. 1; Fig. 9; p. 6, l. 13-16; p. 8, l. 12-14; p. 14, l. 21-32; p. 17, l. 23-27). The master communication device includes a communication judgment unit configured to judge whether or not one of the slave communication devices which has issued a communication request is currently connected (see, e.g., Fig. 2; Fig. 4; p. 4, l. 16-19; p. 6, l. 17-21; p. 8, l. 29-31; p. 9, l. 22-29); a communication connection unit configured to connect the slave communication device determined not to be connected by the communication judgment unit (see, e.g., Fig. 2; Fig. 4; p. 4, l. 20-22; p. 6, l. 22-24; p. 8, l. 32-33; p. 9, l. 30-36); a connected number judgment unit configured to judge whether or not the number of the slave communication devices connected currently reaches a second limited number less than the first limited number (see, e.g., Fig. 2; Fig. 4; p. 4, l. 23-26; p. 6, l. 25-28; p. 8, l. 35 – p. 9, l. 1; p. 10, l. 10-15); a release selection unit configured to select at least one of the slave communication devices to be released, when determined to have reached the second limited number (see, e.g., Fig. 2; Fig. 4; p. 4, l. 27-30; p. 6, l. 29-32; p. 9, l. 1-2; p. 10, l. 30-36); and a communication release unit configured to release the selected slave communication device (see, e.g., Fig. 2; Fig. 4; p. 4, l. 31-32; p. 6, l. 33-34; p. 9, l. 2-3; p. 11, l. 32 - p. 12, l. 2).

The subject matter set forth in independent claim 17 relates to a computer readable medium comprising a computer program code for performing communication between at least one of slave communication devices and a master communication device capable of simultaneously communicating with the slave communication devices within a first limited number determined in advance (see, e.g., p. 18, l. 5-20). The

computer program code performs a method comprising judging by the master communication device whether or not one of the slave communication devices which has issued a communication request is connected currently (see, e.g., Fig. 2; Fig. 4; p. 4, l. 16-19; p. 6, l. 17-21; p. 8, l. 29-31; p. 9, l. 22-29); connecting the slave communication devices judged that the slave communication device is not connected currently, to the master communication device (see, e.g., Fig. 2; Fig. 4; p. 4, l. 20-22; p. 6, l. 22-24; p. 8, l. 32-33; p. 9, l. 30-36); judging by the master communication device whether or not the number of the slave communication devices connected currently reaches a second limited number less than the first limited number (see, e.g., Fig. 2; Fig. 4; p. 4, l. 23-26; p. 6, l. 25-28; p. 8, l. 35 – p. 9, l. 1; p. 10, l. 10-15); selecting by the master communication device at least one of the slave communication devices to be released, when determined to have reached the second limited number (see, e.g., Fig. 2; Fig. 4; p. 4, l. 27-30; p. 6, l. 29-32; p. 9, l. 1-2; p. 10, l. 30-36); and releasing the selected slave communication device by the master communication device (see, e.g., Fig. 2; Fig. 4; p. 4, l. 31-32; p. 6, l. 33-34; p. 9, l. 2-3; p. 11, l. 32 - p. 12, l. 2).

**VI. Ground of Rejection**

A. Claims 1-8 and 11-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Fujioka, and further in view of Lee.

## **VII. Argument**

### **A. The Board Should Reverse the Rejection Under § 103(a) Because A *Prima Facie* Case of Obviousness Has Not Been Established**

Appellants respectfully traverse the rejection of claims 1-8 and 11-20 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Fujioka, and further in view of Lee. A *prima facie* case of obviousness has not been established.

“The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements.” M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008) (internal citation and inner quotation omitted). “[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” M.P.E.P. § 2141(II). In rejecting a claim, “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III). However, in the Final Office Action, the prior art has been mischaracterized such that a *prima facie* case of obviousness has not been established.

Independent claim 1 recites “[a] master communication device capable of simultaneously communicating with slave communication devices within a first limited number determined in advance, comprising: . . . a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited

number; [and] a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number" (emphasis added). Brown fails to teach or suggest at least these elements of claim 1.

The Final Office Action admits that Brown does not disclose the above elements of claim 1 (see Final Office Action, p 3). The Final Office Action then alleges that Fujioka discloses "a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number; [and] a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number" (Final Office Action, p. 3), and that Lee discloses "the second limited number is less than said first limited number" (Final Office Action, p. 4). However, these allegations are not correct.

Fujioka fails to cure the deficiencies of Brown. As pointed out on p. 3-4 of the Final Office Action, Fujioka discloses that

Slave terminals and a master terminal are wirelessly connected according to the Bluetooth protocol. When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules so as to efficiently use the resources in the system. (Abstract.)

Therefore, Fujioka merely discloses that, when a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. However, neither the portion of Fujioka cited by the Final Office Action nor any other portion of Fujioka

constitutes a teaching of “a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number,” or “a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number,” as recited in claim 1 (emphasis added).

Lee fails to cure the deficiencies of Brown and Fujioka. The Final Office Action alleges that Lee discloses that “the second limited number is less than said first limited number” as claimed, stating “Lee teaches in paragraph [0054] “[t]he memory 32 stores priorities of the slave devices that are currently linked to the Piconet. Further, the memory 32 stores a maximum number of slave devices of the high priority and medium priority, respectively (hereinafter called ‘high priority maximum number’ and ‘medium priority maximum number’, respectively)” in order to “prevent an excessive number of slave devices from having high and medium priorities in the Piconet”” (Final Office Action, p. 4).

However, respectively storing a maximum number of slave devices of the high priority and medium priority, as taught by Lee, cannot constitute a teaching of “judg[ing] whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number,” as recited in claim 1 (emphasis added). Furthermore, Lee also fails to teach or suggest “a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number,” as recited in claim 1 (emphasis added). Therefore Lee fails to cure the deficiencies of Brown and

Fujioka. Neither Brown, nor Fujioka, nor Lee, nor any combination of, teaches or suggests the elements of claim 1 recited above.

For at least the above reasons, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and independent claim 1. Accordingly, a reason has not been clearly articulated as why the combination of independent claim 1 would have been obvious to one of ordinary skill in view of the prior art, and a *prima facie* case of obviousness has not been established. Independent claim 1 is allowable. Dependent claims 2-8 are also allowable at least by virtue of their dependence from base claim 1.

Independent claims 11, 13, and 17, although different in scope from claim 1 and from each other, recite elements similar to claim 1 and are thus allowable for at least the reasons discussed above with respect to claim 1. Dependent claims 12, 14-16, and 18-20 depend from one of independent claims 11, 13, and 17, and are allowable at least due to their dependence.

### **CONCLUSION**

In view of the above, pending claims 1-8 and 11-20 are allowable over the applied references. Therefore, Appellants respectfully request the Board to reverse the Examiner's rejection of pending claims 1-8 and 11-20.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith,




including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: September 20, 2010

By:   
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**VIII. Claims Appendix to Appeal Brief Under Rule 41.37(c)(1)(viii)**

1. A master communication device capable of simultaneously communicating with slave communication devices within a first limited number determined in advance, comprising:
  - a communication judgment unit configured to judge whether or not one of said slave communication devices which has issued a communication request is currently connected;
  - a communication connection unit configured to connect said slave communication device judged not to be connected by said communication judgment unit;
  - a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number;
  - a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number; and
  - a communication release unit configured to release the selected slave communication device.
2. The master communication device according to claim 1, further comprising:
  - a waiting registration unit configured to register said slave communication device which issues said communication request, in the issued order, when the number of currently connected slave

communication devices is determined to have reached said second limited number; and

a communication connection unit configured to select and connect at least one of said slave communication device in the order registered in said waiting registration unit.

3. The master communication device according to claim 1, wherein said release selection unit selects by priority said slave communication device which has performed the earliest communication among said slave communication devices connected currently.
4. The master communication device according to claim 1, wherein said release selection unit selects by priority the slave communication device which has been connected for the longest time among said slave communication devices connected currently.
5. The master communication device according to claim 1, further comprising a connection release unit configured to release connection for said slave communication device, when the connected slave communication device has not performed data transferring during not less than a prescribed period.

6. The master communication device according to claim 1, wherein release of connection for said slave communication device is performed by setting said slave communication device to be in an electric power saving mode.
7. The master communication device according to claim 6, wherein communication for said slave communication device is performed according to a specification of Bluetooth;  
  - said master communication device is a master equipment;
  - said slave communication device is a slave equipment; and
  - said electric power saving mode is a park mode.
8. The master communication device according to claim 1, wherein communication for slave communication device is performed according to a specification of Bluetooth.
- 9-10. (Canceled)
11. A communication control apparatus which controls a slave communication device connected to a master communication device capable of simultaneously communicating with said slave communication device within a first limited number determined in advance, comprising:

a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication device;

a connection information registration unit configured to register information relating to said slave communication device currently connected to said master communication device;

a connected number judgment unit configured to judge that the number of said slave communication devices connected to said master communication device reaches a second limited number less than the first limited number, based on information registered in said connection information registration unit;

a communication device selection unit configured to select at least one of said slave communication devices that connection for said master communication device is to be released, when determined to have reached said second limited number; and

a release instruction unit configured to transmit a release instruction to said slave communication device selected by said communication device selection unit.

12. The slave communication device according to claim 11, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and

a release of connection between said master communication device and  
said slave communication device is performed to be set in a park  
mode.

13. A communication system, comprising:

at least one of slave communication devices; and  
a master communication device configured to be able to communicate  
simultaneously with said slave communication device within a first  
limited number determined in advance,

wherein said master communication device includes:

a communication judgment unit configured to judge whether  
or not one of said slave communication devices which  
has issued a communication request is currently  
connected;

a communication connection unit configured to connect said  
slave communication device determined not to be  
connected by said communication judgment unit;

a connected number judgment unit configured to judge  
whether or not the number of said slave  
communication devices connected currently reaches  
a second limited number less than said first limited  
number;

a release selection unit configured to select at least one of  
said slave communication devices to be released,  
when determined to have reached said second limited  
number; and  
a communication release unit configured to release the  
selected slave communication device.

14. The communication system according to claim 13, wherein said master communication device includes:

a waiting registration unit configured to register said slave communication device which has issued said communication request, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number; and  
a communication connection unit configured to select and connect at least one of said slave communication devices in the order registered to said waiting registration unit.

15. The communication system according to claim 13, wherein said slave communication device includes:

a master communication device connection judgment unit configured to judge whether or not to be connected to said master

communication device, when communication request for said master communication device has been issued;

a release report signal supply unit configured to transmit a release report to said communication control apparatus when connection for said master communication device is released; and

a connection release unit configured to release connection for said master communication device when a release instruction for said master communication device is received from said communication control apparatus, while being connected to said master communication apparatus,

wherein said communication control apparatus includes:

- a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication device;
- a connection information registration unit configured to register information relating to said slave communication devices currently connected to said master communication device;
- a connected number judgment unit configured to judge whether or not the number of said slave communication device reaches said second limited



number, based on the information registered to said connection information registration unit;  
a communication device selection unit configured to select at least one of said slave communication devices of which connection for said master communication device is to be released, when determined to have reached said second limited number; and  
a release instruction unit configured to transmit release instruction to said slave communication device selected by said communication device selection unit.

16. The slave communication device according to claim 13, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and

a release of connection between said master communication device and said slave communication device is performed by setting in a park mode.

17. A computer readable medium comprising a computer program code for performing communication between at least one of slave communication devices and a master communication device capable of simultaneously communicating with said slave communication devices within a first limited number determined in advance, the computer program code performing:

judging by said master communication device whether or not one of said  
slave communication devices which has issued a communication  
request is connected currently;

connecting said slave communication devices judged that said slave  
communication device is not connected currently, to said master  
communication device;

judging by said master communication device whether or not the number  
of said slave communication devices connected currently reaches a  
second limited number less than said first limited number;

selecting by said master communication device at least one of said slave  
communication devices to be released, when determined to have  
reached said second limited number; and

releasing the selected slave communication device by said master  
communication device.

18. The medium according to claim 17, the computer program code further  
performing:

judging by said master communication device whether or not one of said  
slave communication devices which has issued communication  
request is connected currently;

judging by said master communication device whether or not the number  
of said slave communication devices connected currently reaches  
said second limited number;

registering said slave communication device which has issued the  
communication request to a waiting registration unit of said master  
communication device, in the issued order, when the number of  
currently connected slave communication devices is determined to  
have reached said second limited number;  
selecting by said master communication device at least one of said slave  
communication devices to be released, when determined to have  
reached said second limited number; and  
selecting at least one of said slave communication devices and connecting  
it to said master communication device, in the order registered to  
said waiting registration unit.

19. The medium according to claim 17, the computer program code further  
performing:

judging by said slave communication devices whether or not to be  
connected to said master communication device, when  
communication request for said master communication device is  
issued;  
transmitting a release report from said slave communication device to said  
communication control apparatus when connection for said master  
communication device is released;  
releasing connection between said master communication device and said  
slave communication device when a release instruction for said

master communication device is received from said communication control apparatus, during being connected to said master communication device;

receiving by said communication control apparatus a connection report from said slave communication devices newly connected to said master communication device;

registering information relating to said slave communication devices currently connected to said master communication device, to said communication control apparatus;

judging by said communication control apparatus whether or not the number of said slave communication devices connected to said master communication device reaches said second limited number, based on the registered information;

selecting by said communication control apparatus at least one of said slave communication devices of which connection for master communication device is to be released, when determined to have reached said second limited number; and

transmitting a release instruction from said communication control apparatus to the selected slave communication device.

20. The medium according to claim 17, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and

a release of connection between said master communication device and  
said slave communication devices is performed by setting in a park  
mode.

**IX. Evidence Appendix to Appeal Brief Under Rule 41.37(c)(1)(ix)**

None.

**X. Related Proceedings Appendix to Appeal Brief Under Rule 41.37(c)(1)(x)**

None.